

IN THE CLAIMS:

This listing of the claims replaces all prior versions and listings of the claims. Please amend claims 14 and 15 and cancel claims 3, 4, 18 and 19 as follows:

1           Claim 1. (previously presented) Method for generating persistent  
2    annotations of multimedia content, comprising one or more repetitions  
3    of the following steps:  
4           actively selecting examples of multimedia content to be annotated  
5    by a user, wherein the examples of multimedia content are selected  
6    based on at least one criterion for achieving a maximal disambiguation  
7    result such that only those examples which are most ambiguous are  
8    selected;  
9           accepting input annotations from said user for said selected  
10   examples;  
11          propagating said input annotations to other instances of  
12   multimedia content; and  
13          storing said input annotations and said propagated annotations.

1           Claim 2. (original) The method of claim 1, wherein the step of  
2   actively selecting is performed using a selection technique selected  
3   from the group consisting of: deterministic and probabilistic.

1           Claims 3 and 4 (canceled)

1           Claim 5. (previously presented) The method of claim 1, wherein  
2   an optimization criterion for active selection includes one or more  
3   criteria selected from the group consisting of: information measures  
4   and confidence.

1           Claim 6. (original) The method of claim 1, wherein the  
2   multimedia content comprises one or more types selected from the group  
3   consisting of: images, audio, video, graphics, text, multimedia, Web  
4   pages, time series data, surveillance data, sensor data, relational  
5   data, and XML data.

1           Claim 7. (original) The method of claim 1, wherein the input  
2   annotations are created by a user with reference to a vocabulary.

1           Claim 8. (original) The method of claim 7, wherein the  
2   vocabulary contains one or more items selected from the group  
3   consisting of: terms, concepts, labels, and annotations.

1           Claim 9. (original) The method of claim 1, wherein the process  
2 of creating input annotations by the user involves multimodal  
3 interaction with the user using graphical, textual, and/or speech  
4 interface.

1           Claim 10. (original) The method of claim 1, wherein the input  
2 annotations are created by means of steps selected from the group  
3 consisting of: creating new annotations, deleting existing annotations,  
4 rejecting proposed annotations, and modifying annotations.

1           Claim 11. (original) The method of claim 7, wherein the  
2 vocabulary is adaptively or dynamically organized and/or limited by the  
3 system or the user.

1           Claim 12. (original) The method of claim 9, wherein the  
2 multimodal interaction involves speech recognition, gaze detection,  
3 finger pointing, expression detection, and/or effective computing  
4 methods for sensing a user's state.

1           Claim 13. (original) The method of claim 1, wherein the  
2 determination of the propagation of annotations is made  
3 deterministically or probabilistically and on the use of models for  
4 each annotation or for joint annotations.

1           Claim 14. (previously presented) The method of claim 13, wherein  
2 the models are created or learned automatically or semi-automatically  
3 and/or are updated adaptively from interaction with the user.

1           Claim 15. (previously presented) The method of claim 13, wherein  
2 the models are based on nearest neighbor voting or variants, parametric  
3 or statistical models, expert systems, rule-based systems, or hybrid  
4 techniques.

1           Claim 16. (previously presented) System for generating  
2 persistent annotations of multimedia content, comprising:  
3       means for actively selecting examples of multimedia content to be  
4 annotated by a user, wherein the examples of multimedia content are  
5 selected based on at least one criterion for achieving a maximal  
6 disambiguation result such that only those examples which are most  
7 ambiguous are selected;  
8       means for accepting input annotations from said user for said  
9 selected examples;

10 means for propagating said input annotations to other instances  
11 of multimedia content; and  
12 means for storing said input annotations and said propagated  
13 annotations.

1 Claim 17. (original) The system of claim 16 wherein the means  
2 for actively selecting uses a selection technique selected from the  
3 group consisting of: deterministic and probabilistic.

1 Claims 18 and 19 (canceled)

1 Claim 20. (previously presented) The system of claim 16, wherein  
2 an optimization criterion for active selection includes one or more  
3 criteria selected from the group consisting of: information measures  
4 and confidence.

1 Claim 21. (original) The system of claim 16, wherein the  
2 multimedia content comprises one or more types selected from the group  
3 consisting of: images, audio, video, graphics, text, multimedia, Web  
4 pages, time series data, surveillance data, sensor data, relational  
5 data, and XML data.

1 Claim 22. (previously presented) A computer program product in a  
2 computer readable medium for generating persistent annotations of  
3 multimedia content, the computer program product comprising  
4 instructions for performing one or more repetitions of the following  
5 steps:

6 actively selecting of examples of multimedia content to be  
7 annotated by a user, wherein the examples of multimedia content are  
8 selected based on at least one criterion for achieving a maximal  
9 disambiguation result such that only those examples which are most  
10 ambiguous are selected;

11 accepting input annotations from said user for said selected  
12 examples;

13 propagating said input annotations to other instances of  
14 multimedia content; and

15 storing said input annotations and said propagated annotations.

1 Claim 23. (previously presented) The method of claim 1, wherein  
2 the at least one criterion includes an ambiguity level of the selected  
3 examples.

1           Claim 24. (previously presented) The method of claim 1, wherein  
2     the at least one criterion includes a confidence level of the selected  
3     examples, the confidence level being inversely proportional to a  
4     distance of a new feature of the selected examples from a separating  
5     hyperplane in an induced higher dimensional feature space.

1           Claim 25. (previously presented) The system of claim 16, wherein  
2     the at least one criterion includes an ambiguity level of the selected  
3     examples.

1           Claim 26. (previously presented) The system of claim 16, wherein  
2     the at least one criterion includes a confidence level of the selected  
3     examples, the confidence level being inversely proportional to a  
4     distance of a new feature of the selected examples from a separating  
5     hyperplane in an induced higher dimensional feature space.

1           Claim 27. (previously presented) The computer program product of  
2     claim 22, wherein the at least one criterion includes an ambiguity  
3     level of the selected examples.

1           Claim 28. (previously presented) The computer program product of  
2     claim 22, wherein the at least one criterion includes a confidence  
3     level of the selected examples, the confidence level being inversely  
4     proportional to a distance of a new feature of the selected examples  
5     from a separating hyperplane in an induced higher dimensional feature  
6     space.

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